

**SPTECH Silicon NPN Power Transistor**

**2SC5197**

**DESCRIPTION**

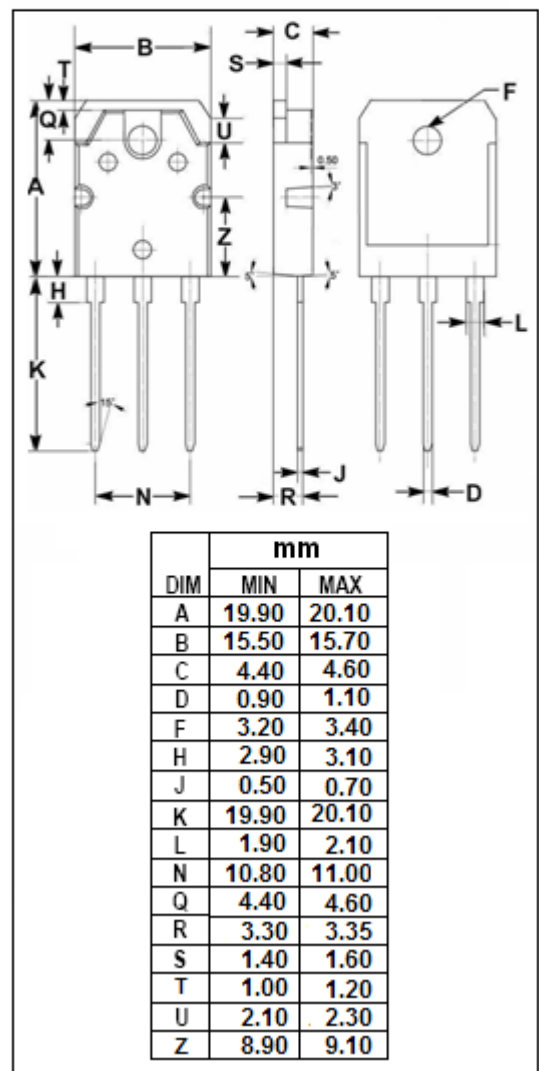
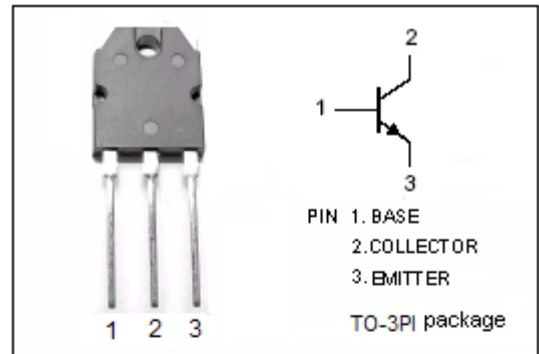
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = 2.0V(\text{Min}) @ I_C = 6A$
- Good Linearity of  $h_{FE}$
- Complement to Type 2SA1940

**APPLICATIONS**

- Power amplifier applications
- Recommend for 55W high fidelity audio frequency amplifier output stage applications

**ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	120	V
$V_{CEO}$	Collector-Emitter Voltage	120	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	8	A
$I_B$	Base Current-Continuous	0.8	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	80	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$



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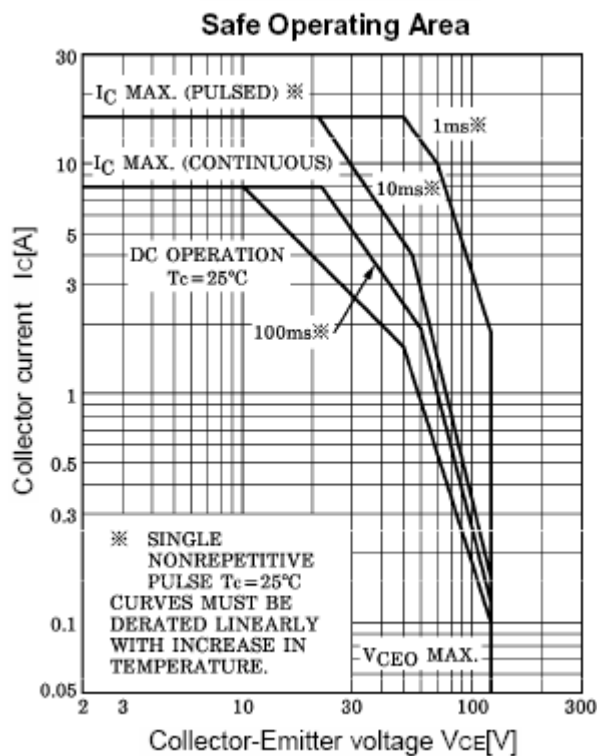
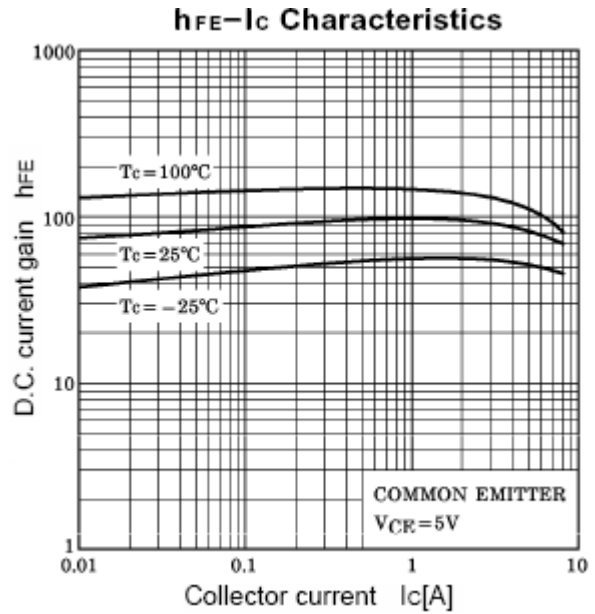
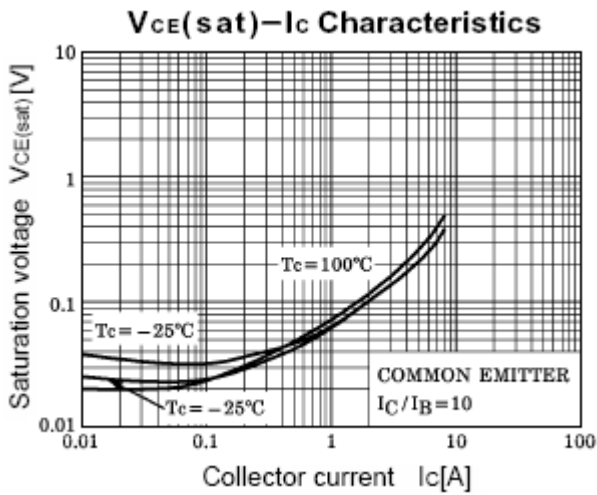
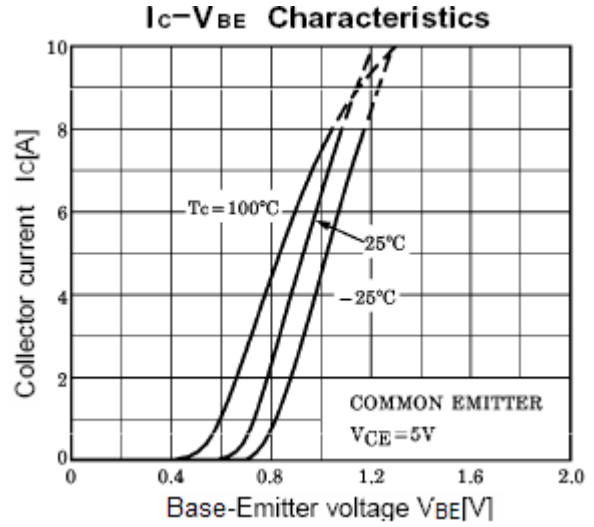
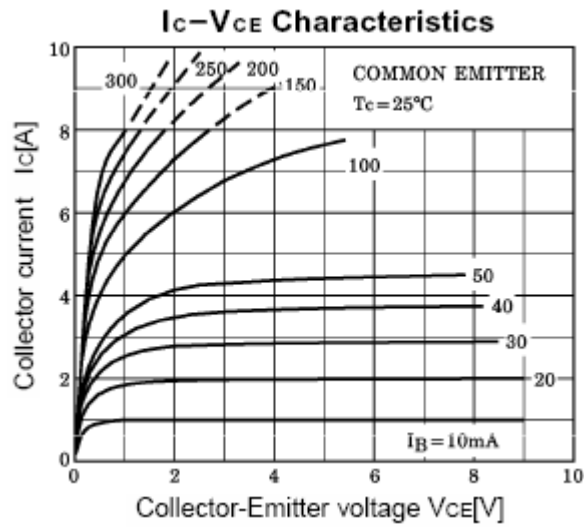
**ELECTRICAL CHARACTERISTICS**

$T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C= 50\text{mA}$ ; $I_B= 0$	120			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 6\text{A}$ ; $I_B= 0.6\text{A}$			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 4\text{A}$ ; $V_{CE}= 5\text{V}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}= 120\text{V}$ ; $I_E= 0$			5	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}= 5\text{V}$ ; $I_C= 0$			5	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C= 1\text{A}$ ; $V_{CE}= 5\text{V}$	55		160	
$h_{FE-2}$	DC Current Gain	$I_C= 4\text{A}$ ; $V_{CE}= 5\text{V}$	35			
$C_{OB}$	Output Capacitance	$I_E= 0$ ; $V_{CB}= 10\text{V}$ ; $f_{test}= 1.0\text{MHz}$		120		pF
$f_T$	Current-Gain—Bandwidth Product	$I_C= 1\text{A}$ ; $V_{CE}= 5\text{V}$		30		MHz

◆  **$h_{FE-1}$  Classifications**

R	O
55-110	80-160



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